


Soldiers
Online

Gopher State

THOUGH shrouded in early morning fog, the main deck of the cargo vessel *Gopher State* was a busy place. To one side a 58-ton Army landing craft was being lifted by a shipboard crane and swung out over the water, while on the other side soldiers prepared boxy cargo containers for the short trip from deck to pier.

All the activity took place in February at the British army's Marchwood Military Port in Southampton, England, as soldiers from Fort Eustis, Va., joined workers from the Army's Combat Equipment Battalion-Hythe in off-loading the *Gopher State*. One of three ships that carry prepositioned Army watercraft and port-opening equipment, she had arrived the day before from Guam and was scheduled to leave a week later — empty — for maintenance in a stateside shipyard. Her time at the Marchwood pier was limited, and the soldiers and CEB-H civilians were working against the clock to relieve her of her cargo.

That specialized cargo is intended to support the construction of a ship-to-shore modular causeway system — which consists of a roll-on, roll-off discharge facility, or



Soldiers and crew members look on and commercial tugs stand by as *Gopher State*'s onboard cranes lower a side-loadable warping tug into the waters of Southampton harbor.

Off-load

Story and Photos by Steve Harding



Personnel from CEB-Hythe orchestrated the off-load process, working with the Gopher State's captain and crew and the Fort Eustis-based 7th Transportation Group.

RRDF, and floating causeway — when port facilities are not available. The RRDF enables ships to offload vehicles and equipment to landing craft offshore. The causeway, a floating pier, enables the landing craft to discharge those vehicles and equipment ashore when the gradient is too shallow to allow them to land directly on the beach.

In addition to the disassembled causeway sections, the *Gopher State* carries barge-like side-loadable warping tugs used to assemble and move the causeway, LCM-8 landing craft, vehicles and standard commercial cargo containers full of support equipment.

Personnel from CEB-Hythe — the Army's forward watercraft maintenance and support facility near Southampton [see accompanying story] — orchestrated the off-load process, working with the *Gopher State*'s captain and crew and the Fort Eustis-based 7th Transportation Group to ensure that both the ship and the personnel necessary to off-load it

would all arrive on time.

"The point of this whole operation," said CEB-Hythe commander LTC Brad J. Liberg, "is for us to undertake a 90-day maintenance cycle on the equipment loaded aboard the *Gopher State*. That cycle takes place every two years and entails off-loading the ship; running the equipment through a test, evaluation and verification procedure; and then servicing all the equipment and ultimately reloading it aboard *Gopher State*."

"Every time we do this sort of maintenance cycle on the watercraft and equipment aboard any of the three port-opening vessels in the Army Prepositioned Stocks-Afloat, or APS-3, program, we involve U.S. forces," Liberg said. "In this case it's soldiers from the 7th Group at Fort Eustis — the same soldiers who would deploy to meet these vessels in a contingency. They get the chance to assist in the off-load; run the test, evaluation and verification process; and, for the first time, will actually assemble the causeway systems as a prelude to our

evaluation of it." [See accompanying story.]

Planning a Joint Effort

The idea of assembling the off-loaded causeway sections as part of the test, evaluation and verification process came up in October 2000, said Chris Gill, CEB-Hythe's planning and operations officer, and was fleshed out during a later planning meeting in the United States.

"We really started pulling everything together, in terms of schedules and the soldiers to be used, in November," Gill said. "We then had various officials come over from Fort Eustis to help in the final planning process."

That process included everything from ensuring that the *Gopher State* would arrive on time; to arranging for pier space at Marchwood; to planning the actual order of the off-load; to organizing the movement of the off-loaded watercraft and causeway sections from Marchwood to nearby Hythe; to organizing accommodations for the Fort Eustis soldiers.

"The British army has been tremendously helpful," Gill said. "They've allowed us to use this port for six days — at no cost to the U.S. government — and have provided dockside cargo-handling equipment, personnel to operate it and many other things."

As part of the preparations, an 11-member CEB-Hythe Offload Preparation Party joined *Gopher State* during its voyage from Guam to England to begin preparing the watercraft, vehicles and cargo containers for unloading. A team of soldiers from the Fort Eustis-based 149th Port Operations Cargo Detachment also went aboard early, their task being to ready the huge shipboard cranes for the work they'd be doing at Marchwood.

"The cooperation among all the players has really been tremendous," Gill said. "We've got the necessary



An LCM-8 landing craft goes over *Gopher State*'s side as soldiers from the Fort Eustis-based 149th Port Operations Cargo detachment steady it with tag lines.



Gopher State's cargo also includes vehicles, among them this Humvee being lowered to the Marchwood pier by the facility's huge dockside crane.

Rigging the ship's cargo for off-load is hard and dangerous work. Here soldiers of the 149th POCD work to attach lifting gear to one of the side-loadable warping tugs.

equipment and we've got the facilities, so now it's a question of orchestrating the various elements during the actual off-load."

A Major Undertaking

The first part of the off-load — actually getting the cargo off the ship — fell to a mixed force of about 20 of CEB-Hythe's British workers and a 30-member platoon of stevedores from the 149th POCD.

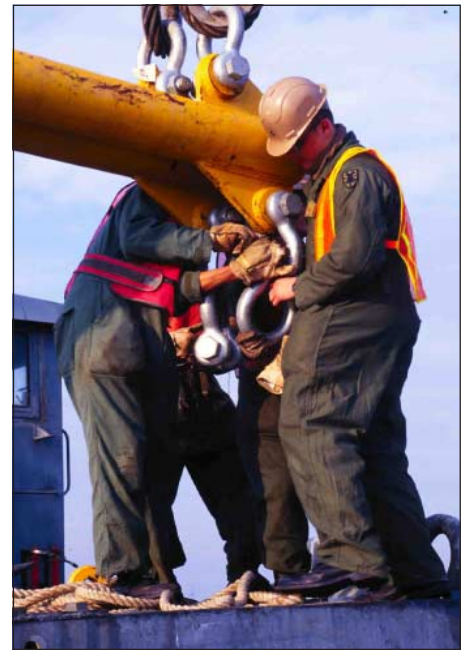
The task that faced them was daunting, for the 670-foot long, 31,000-ton *Gopher State* was crammed with equipment. On deck were the LCM-8 landing craft, side-loadable warping tugs and cargo containers — all packed tightly together, sitting on blocks atop the huge steel hatches that covered the openings to the ship's cavernous holds. Beneath the hatches were more cargo containers, the causeway sections and the vehicles — Humvees, trailers, fuel tankers and five-ton trucks.

Though some of the equipment was





Britain's notoriously changeable weather was also a factor during the *Gopher State* off-load — bright sun alternated with thick fog, rain, sleet and even light snow.



Soldiers from the 149th POCD work together to prepare a lifting bar before attaching it to a side-loadable warping tug.

to be off-loaded using a huge pier-mounted crane, much of it was to be moved using *Gopher State*'s own cranes. Mounted on the ship's starboard side are two structures, each of which consists of two cranes, each of which can be operated either independently or "slaved" together. Each crane has its own operator's booth set about 60 feet above the deck, and it was from these booths that soldiers like the 149th POCD's SPC Vaughn D. Michaud controlled the huge devices.

Simultaneously manipulating two joysticks and two foot pedals, Michaud carefully lifted an LCM-8 and moved it outboard. On the deck below, SSG David Pollard, the 149th's off-load NCOIC, used a handheld radio to coordinate Michaud's actions with those of the soldiers holding the steadying guide ropes, called tag lines, attached to each corner of the landing craft. Working together, the soldiers eased the huge watercraft between structures on the ship's deck and over the side, where Michaud lowered it gently into the water. A crew of soldiers then hopped aboard from a waiting tug and soon moved the landing craft off toward Hythe.

As Michaud swung the crane around for its next lift, Pollard and the other soldiers on the deck moved to attach the crane's lines to the next landing craft. Elsewhere on *Gopher*

“When you watch all that goes on during an operation like this, you can really tell that it’s a group effort and that everybody has a role to play.”

State other soldiers and CEB-Hythe civilians were equally busy, and it was quickly apparent that the ship’s vast deck could be a very dangerous place to work.

“Absolutely,” said Pollard, looking on as soldiers holding tag lines helped turn a second LCM-8 toward the ship’s railing. “This can be a very dangerous job. There is always a lot happening all around you when you’re unloading a ship — things are being lifted over the side by cranes, hatches are open, all that. But as long as you follow the safety procedures and stay alert, you’ll be all right.”

“Safety is our primary concern,” added 1LT Adisa Gibson, the 149th POCD’s executive officer. “Before any operation we give the soldiers a risk assessment and safety briefing. We also reinforce the idea that every soldier is a safety officer — anyone who sees something unsafe can call a halt to the work. We don’t want anybody hurt, and if there is something that I don’t see, or that the NCOIC doesn’t see, we know we can count on the soldiers to see it and stop the work until we correct the situation.”

“And it also helps to actually do the job,” Pollard said. “Because the more we do it, the better we are and the safer it is.

So this type of real-world training is great for us. And you can see that during this operation. We’re getting into the swing of things now, working the shoreside crane and the shipboard cranes, and things are really going well.”

Into the Holds

Once the watercraft and cargo containers stored on *Gopher State*’s

deck were off-loaded, the soldiers and CEB-Hythe civilians began removing the covers of the cargo hatches. Beneath them were the disassembled causeway sections, held firmly one atop the other within rectangular, rack-like retaining structures rising from the ship’s lowest deck all the way to the lip of the hatch. By lowering a self-connecting, rigid lifting frame onto the top of each causeway section, the crane operator was able to extract the sections without the need for soldiers to climb down and hook things up by hand.

As each causeway section came out of the hold it was lifted across the ship’s deck and over its side, then stacked aboard a waiting barge. Each loaded barge was then towed away to

That done, the containers were placed aboard waiting trucks, while soldiers drove the off-loaded vehicles to a nearby marshalling yard in preparation for the short drive to Hythe’s rolling stock maintenance facility at Marchwood.

A Group Effort

Though the *Gopher State* off-load did encounter a few glitches — including a shortage of barges because the causeway sections were unloaded faster at Marchwood than they could be accepted at Hythe — it ultimately succeeded, Pollard said, because of the effort of all its participants.

“When you watch all that goes on during an operation like this, you can

really tell that it’s a group effort and that everybody has a role to play,” he said. “Soldiers from the POCD, members of the ship’s crew and civilians from CEB-Hythe handle the unloading aboard ship; the cargo-transfer soldiers take the vehicles and equipment from the pier and move them onward; and the causeway troops take charge of assembling the causeway. We all communicate, and we all work together to get the job done.”

“It really is a group effort,” agreed Gill. “And

it worked out well. Now, we’ll begin the test, evaluation and verification procedure. When *Gopher State* returns 90 days from now, we’ll load the cargo containers, causeway sections and watercraft in reverse order, so that everything will be in the correct order for the next off-load. And the upload will certainly be a challenge, because it’s always easier to extract things from a ship than to put them into it.”

But that’s another story. □



Crane operator SPC Vaughn D. Michaud looks on as soldiers below attach a lifting frame to a cargo container in the ship’s hold.

Hythe, where the waiting causeway soldiers unloaded it and began assembling the causeway.

Cargo containers and vehicles also came up from below, lifted by the huge shoreside crane and put down on the Marchwood pier. There, personnel from CEB-Hythe’s Supply and Storage Division scanned each load’s identifying barcode — as they did with every piece of equipment that came off the ship — to ensure a complete inventory.

Special Mission,

Story and Photos by Steve Harding

LTC Brad J. Liberg is proud of his installation, and it shows. The commander of the Combat Equipment Battalion-Hythe takes obvious pleasure in talking about the unique facility.

“CEB-Hythe is a subordinate command of Army Materiel Command’s Combat Equipment Group-Afloat, and is the Army’s only government-owned, government-operated watercraft maintenance facility capable of depot-level work,” Liberg said. “We have an extremely

professional, very responsive and very experienced work force, and we have what I think is the ideal facility for carrying out our mission.”

That mission, simply put, is to perform maintenance in support of the watercraft, equipment and supplies stored aboard the APS-3 vessels *Strong Virginian*, *Gopher State* and *American Cormorant*. That entails a range of tasks, from watercraft maintenance and modification to the care, preservation and storage of all the items placed aboard the prepositioned

vessels. Hythe also stores, maintains and modifies APS-3 watercraft not carried on the three vessels.

Originally a World War II Royal Air Force seaplane base, Hythe covers 11 harborside acres near the port of Southampton. Established as an Army installation in the 1960s specifically to store and maintain Army watercraft intended for wartime use in Europe, the facility has long been able to draw upon the maritime and shipbuilding expertise concentrated in the area.

Ensuring that forward-deployed



A tugboat undergoing modification sits on CEB-Hythe’s open-air work area. The large rails beneath the boat allow vessels to be moved into the facility’s huge covered work building, a former Royal Air Force seaplane hanger.

Special Post

Army watercraft are ready to go wherever they are needed is a team effort. Hythe's work force consists of three Americans — Liberg, his civilian deputy, Fred Chapin, and supply technician CW3 Joy D.D. Taylor — and between 160 and 170 British workers in several specialist groups.

The ship surveyors and inspectors of Hythe's Quality Control Division are responsible for examining the watercraft to determine what repairs or modifications are needed, then writing the specifications for the work. The job is actually done by local contractors or by the electricians, ship fitters, shipwrights, mechanics, electronics technicians, packaging specialists and painters of Hythe's Maintenance Division. Local contractors may also be used if a particular operation is beyond CEB-Hythe's capabilities.

The watercraft structural work done at Hythe can range from minor repairs to the prototyping of new vessels, such as the modified LCM-8 landing craft Hythe is currently turning into harbormaster command-and-control vessels.



CEB-Hythe's vast warehouse is home to thousands of items — everything from basic soldier items to repair parts for the watercraft — all of which must be accurately tracked.

Hythe's other main task — preserving watercraft and the supplies and equipment embarked aboard them — is undertaken by the facility's Supply and Storage Division.

The division's Preservation Section takes everything removable off the vessels, then inspects, replaces or stores each item as needed. Many have

"use by" dates on them, and when that date passes the items are reinspected, tested and repaired or replaced.

The division's other function — supply — requires the procurement of everything from basic soldier items to repair parts for the watercraft. As the accountable officer, Taylor is signed for more than \$300 million worth of APS-3 equipment, which is spread among the three ships and Hythe itself. Keeping track of everything is especially important, of course, and every APS-3 item that goes aboard or comes off the ships is scanned to allow precise inventory tracking.

The depot's Administration and Services section keeps track of all the personnel, planning and policy issues involved in running the mini-shipyard. One of its primary tasks is supervising the dispatch of small, customized teams of specialists to forward areas to support watercraft.

"We undertake a range of tasks," Liberg said, "and we're fortunate in having the facilities and the right mix of talented people to do those jobs."

"Our vision is to be the Army's center of excellence for watercraft maintenance," he said, "and I honestly believe we fulfill that vision." □



Just as the U.S. and Royal Air Force flags both fly in front of Hythe's headquarters, the facility's American and British personnel work together to accomplish the mission.

Building the Causeway

Story and Photos by Steve Harding

WATCHING soldiers of the 331st Transportation Company assemble a floating causeway, it's easy to understand why the job is called the most dangerous in the Army watercraft field.

At the Combat Equipment Battalion-Hythe near Southampton, England, members of the Virginia-based 331st used cranes, ropes and brute strength to move multi-ton causeway pieces from a barge onto a pier. As each load touched down, soldiers scrambled onto and around it, using crowbars and sledgehammers to transform the three individual pieces into a single, larger

rectangular unit.

These were then lifted off the pier and placed in the water, where they bobbed like fresh-cut logs in a river. Other 331st soldiers then hopped from one section to another like lumberjacks, pulling the floating sections together and securing them, then moving on to the next. A misstep or moment of carelessness at any point in the process could have meant disaster.

"This is a dangerous job, there's no doubt about that," said the 331st's SGT Michael Ray Rodriguez, a member of the 30-soldier detachment sent to England to assemble the

causeway sections downloaded from the cargo ship *Gopher State*.

"A lot of it is due to the nature of the job — it's wet, things get slippery," he said. "We've got thousands of pounds in movement all around us, and if it's on the water and someone slips off and falls between two sections that are coming together, you just can't stop it. Tools can slip and working long shifts in bad weather can wear you down. The bottom line is that you have to pay attention, follow the safety procedures and use your head."

An Intricate Puzzle

"'Using your head' is key for all soldiers in the causeway business," said 2LT Jeffery Masengale, commander of the 331st detachment at Hythe. "And not just because of the potential dangers. Assembling a causeway is like putting together a huge, three-dimensional puzzle, and it takes planning and attention to detail to do it right."

The causeway is essentially a floating pier that stretches outward from a beach, Masengale explained, allowing ships that



A side-loadable warping tug moves toward the CEB-Hythe pier with a barge bearing unassembled causeway sections off-loaded from the *Gopher State*.

can't actually get to the beach itself to load or unload vehicles and cargo offshore. At the causeway's seaward end is a wide area onto which vehicles and equipment can be unloaded and then driven directly to shore. The causeway is especially valuable if existing port facilities are unusable because of damage or enemy action.

The basic causeway pieces are a 40-foot-long by 8-foot-wide by 4-foot-deep rectangular center section and two 20-foot-long by 8-foot-wide by 4-foot-deep end sections. When joined, the three sections form an 80-foot-long unit. Three completed units, joined along their long sides, form an 80-foot-by-24-foot segment called a "section." Multiple sections are then joined together to form the causeway, which can extend up to 1,500 feet offshore.

A key element in the causeway assembly process is the side-loadable warping tug, or SLWT, the craft used to move the causeway sections and tend the completed structure. Though the barge-like SLWT is ungainly looking — it's 85 feet long, rectangular, low to the water and has a small pilothouse set off to one side — it's actually well suited to the job,



Causeway sections aboard the barge loom over SGT Paul Clary's side-loadable warping tug as he uses the smaller craft's water jets to move both vessels toward the pier.

Masengale said. The swiveling heads on its two water-jet propulsion units make it more maneuverable than it looks, and in favorable seas a good coxswain can move the floating causeway sections around with relative ease.

From Cargo to Causeway

Though causeways are often assembled during training at Fort Eustis and have been part of various contingency operations elsewhere in the world, the call to put one together in England was something new for the soldiers of the 331st Trans. Co.

"Our job here is to assemble the causeway using the sections and other equipment stored aboard the *Gopher State*," Masengale said, "after which the workers at Hythe will do any required maintenance. Then we'll come back when it's time to load all the causeway elements back aboard the ship, and we'll put them back so they come off in the right order. This is a first for us, and for the folks here at CEB-Hythe."

"I think our soldiers are all pretty excited to be doing the job here in England," said SSG Joseph Helmsderfer, the detachment's NCOIC. "Not only are we helping the folks here at Hythe to do their maintenance mission, but we're doing the job we're trained to do."

During the operation at Hythe, the plan called for the 331st soldiers to complete the causeway assembly within five or six days. To accomplish that goal, the soldiers formed two

teams, each working a 12-hours shift. That's not unusual in the causeway business, Helmsderfer said.

"The soldiers are used to working 24-hour operations to put these things together," he said. "So the round-the-clock work schedule isn't that big a factor. That's just NCOs taking care of soldiers."

"The biggest challenge in putting together a causeway," Masengale said, "is dealing with the weather. If it gets too bad or the seas get too rough, you can't assemble the causeway. The smoother the seas, the easier the whole thing goes together."

"The availability of support equipment is also important, as are the ship's capabilities," Helmsderfer added. "Then there's the smaller stuff, like do we have the proper tools? There are specialized tools made just for this job, and they're supposed to be loaded aboard the *Gopher State*. If they're not, it will be virtually impossible to assemble the causeway."

Putting It All Together

At Marchwood Military Port the unassembled causeway pieces — a 40-foot long center section with its two accompanying 20-foot end sections stacked and secured atop it — were lifted from *Gopher State's* holds by shipboard cranes and set onto waiting barges. These pieces, known as ISOPAKs, were then moved the mile or so to Hythe by soldier-operated SLWTs or commercial tugboats, and each ISOPAK was then lifted onto the pier by crane.





Once the unassembled causeway sections are lifted onto the pier, soldiers fold the end sections out and down and connect the built-in locking mechanisms.

Soldiers from the 331st then swarmed over the causeway pieces, first releasing the fasteners that held each three-piece element together, then attaching the crane cables and guide ropes that would allow the two smaller end pieces to be lifted from their storage positions and set down at each end of the main center section. Sledgehammer- and crowbar-wielding soldiers then fastened the elements together using built-in connectors. Each completed 80-foot-long piece was lifted by crane and put into the water alongside the pier, and an SLWT then moved in to push the sections together so soldiers could connect them.

Each shift worked flat-out to assemble as many sections as possible, disregarding the frequent weather changes of a late English winter — icy

nights, early morning fogs that often gave way to sleet and freezing rain, and winds that kicked the deeper waters of Southampton Harbor into whitecaps. The only real slowdown in the operation, however, wasn't weather related — the download of causeway sections from *Gopher State* went so quickly that there initially weren't enough barges to transport them all to Hythe. That was soon sorted out, though, and the assembly continued as planned — despite the challenging conditions.

A Special Breed

Given the many challenges of the causeway-assembly mission, it takes a special breed of soldier to do it, Masengale said, especially since there is no specific causeway MOS.

The soldiers in the 331st Trans. Co. hold maritime-related MOSs, he said, and are either 88H crane operators, 88K watercraft operators or 88L watercraft engineers.

“When the Army needs to create a port anywhere in the world, whether during wartime or some other contingency, we’re the ones who get the call.”

“The highest enlisted level in the company is that of pilot, who is responsible for actually moving the large causeway pieces around at sea, and coordinating the effort,” Helmsderfer said. “The E-5s serve mainly as coxswains, actually operating the watercraft. The remaining soldiers do a variety of tasks, including the assembly of the causeway sections, working the tag lines that steady the sections when they’re being lifted by cranes, and so on.”



Each completed 80-foot section is put into the water, where soldiers use sledgehammers to fully seat the locking pins.

It's not a glamorous or well-known line of work, Helmsderfer acknowledged.

“In the watercraft field the boats — the landing craft, logistics-support vessels and tugs — are the real attention-grabbers,” he said. “And the causeway operations units tend to get overlooked, because people don't know what we do or how important it is.

“But the reality is that this job is vital,” Helmsderfer said. “During a contingency the Army can't fly in all the necessary tanks, trucks and other equipment — most of it will have to come by ship. When the Army needs to create a port anywhere in the world, whether during wartime or some other contingency, we're the ones who get the call.” □



A side-loadable warping tug pushes causeway sections together so they can be locked into place. Connecting the sections can be especially challenging in rough weather.